

## **REMARKS**

This paper is filed in response to the Final Office Action mailed March 16, 2010. Claims 8-11 and 13-24 are pending in the application. Claims 1-7 and 12 have been withdrawn. Claims 8 and 13 have been amended. Claims 9-11, and 14-24 are previously presented. Applicants respectfully request reconsideration of the claims in view of the amendments and remarks made herein for allowance. Alternatively, should the Examiner maintain the cited rejections in view of the newly presented amendments and arguments, Applicants submit that these amendments are arguments being made to place the application in better condition for Appeal.

### **Claim Amendments**

Claims 8 and 13 have been amended. Claim 8 has been amended to clarify that the optically active carbon-substituted methylamines and the optically active monoisocyanates must be in enantiomeric excess. Support for this amendment can be found on at least page 13, lines 25 through page 14 line 11 of the application as filed.

Claim 13 has been amended to add the term “group” at the end of the claim, which was inadvertently deleted in the previous amendment to claim 13.

Therefore, Applicants submit that no new matter has been added.

### **35 U.S.C. §102(b)**

Claims 8-11, 13-15 and 19-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Kurasaki et al (JP 2000-226442) (hereinafter the “Kurosaki” reference).

In order for a reference to be anticipating, each and every limitation of the claims must be disclosed in that reference. MPEP § 2131. Where the reference fails to disclose a claimed limitation, rejection on the basis of §102(b) is improper.

Applicants traverse and respectfully submit that a proper §102(b) rejection has not been made.

The Office Action indicates that “regarding claim 8, Kurosaki et al discloses a rheology modification agent (curing accelerators-abstract) obtained by reacting one or more

polyisocyanates....with one or more optically active carbon-substituted methylamines of formula I, wherein the amine of formula I is not an optically active amino acid and not an optically active amino acid ester (methylbenzyl amine – paragraph 0007).” Applicants have reviewed paragraph 0007 of the machine translated text and do not see any discussion of optical activity of amines or isocyanates.

Further, Kurosaki fails to teach several limitations of the claimed invention. For example, Kurosaki does not teach or suggest a rheology modification agent at all. Applicants respectfully submit that the discussion of a curing accelerator in Kurosaki is not relevant to claimed invention, which is directed toward rheology modification agents. Rheology modification agents in coating compositions relate to modifications of properties of coating composition such as viscosity and shear (see application as filed page 1, lines 21-25).

Kurosaki fails to teach a mixture of either optically active monoisocyanates in enantiomeric excess with polyamines or optically active monoamines in enantiomeric excess with polyisocyanates in a rheology modification agent, as required by claim 8 of the present invention as amended.

In fact, Kurosaki does not discuss the concept of chirality (optical activity) at all. Kurosaki does not discuss the concept of selecting chiral (optically active) structures, in particular those structures according to claim 8 as amended. Moreover, there is no teaching of selecting chiral structures and then providing them in enantiomeric excess at all.

Contrary to the Examiner’s statement that “it appears that this reaction product would have inherently exhibited rheology modification properties because all the material/chemical limitations of the instant invention have been satisfied” none of the compounds mentioned in Kurosaki is a chiral compound *at all*. Specifically, Kurosaki is divided into four inventions.

1<sup>st</sup> invention: an epoxy resin made by reacting isocyanate and alicyclic amine. None of the alicyclic amines mentioned in paragraph 0006 of the translated Kurosaki are primary and therefore not relevant to the patentability of the claimed invention. As indicated in the formula of the claimed invention, the amine must be a primary amine which is adjacent to the chiral carbon (C\*).

2<sup>nd</sup> invention: an isocyanate compound and a low-grade dialkyl amine (see paragraph 0007). However, dialkyl amines are excluded from the claimed invention.

3<sup>rd</sup> invention: tosylisocyanate and a secondary amine (paragraph 0008). Secondary amines are not covered by the claimed invention and tosylisocyanate is not chiral.

4<sup>th</sup> invention: imidazole and diisocyanate – is not relevant as there is no chiral compound and imidazole is not covered by the claimed invention.

As such, according to Applicants' reading of Kurosaki, it is impossible for Kurosaki to teach a composition resulting from the reaction of optically active component (either a monoamine or monoisocyanate) with a second component (either a polyisocyanate or a polyamine respectively), wherein the optically active component is provided in enantiomeric excess.

Moreover, contrary to the Examiner's statement that "Kurosaki is silent on the amine being optically active and reaction product being a non-racemic; however when the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate..." optically active components in enantiomeric excess are not inherent properties. Because Kurosaki does not disclose any optically active components, it is impossible for these components to be present in enantiomeric excess (non-racemic mixtures). As such, the Examiner's use of "inherent properties" of a reference for missing claim limitations is incorrect in this case.

In sum, Kurosaki fails to teach several limitations of the claimed invention and therefore the §102 rejection of claims 8-11 and 13-24 as amended is improper and should be withdrawn.

### **35 U.S.C. §103**

Claims 8-11, 13-16, 18-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Butler (4,311,622) in view of Kurosaki et al (JP 2000-226442).

Alternatively, claims 8-11 and 13-21 are rejected under 35 USC 103(a) as being unpatentable over Butler (4,311,622) in view of Kurosaki et al (JP 200-226442) and further in view of Flosbach et al (6,815,501).

To establish a *prima facie* case of obviousness, the Examiner must demonstrate three elements: some suggestion or motivation to modify or combine the reference teachings, a

reasonable expectation of success, and the combined prior art references must teach or suggest all the claim limitations. MPEP § 2141. Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness, in that the Examiner has failed to provide a combination of prior art references, alone or with general knowledge that teach or suggest all the claim limitations.

Applicants hereby incorporate the discussion of the Kurosaki reference under §102 above into the instant response to the §103 rejection. As such, Applicants submit that Kurosaki fails to teach several limitations of the claimed invention, including the use of either optically active monoamines in enantiomeric excess with polyisocyanates or optically active monoisocyanates in enantiomeric excess with polyamines in a rheology modification agent. None of the other references cited by the Examiner cure this deficiency.

Buter relates to a “thixotropic coating composition that is prepared from a binder and a sag control agent which is the reaction product of a diisocyanate and a monamine or hydroxy monoamine”. (Abstract). However, Buter does not discuss optical activity, nor does Buter even mention the concept of implementing optically active isocyanates and amines in enantiomeric excess in a rheology modification agent. While Buter coincidentally discloses some amines that may be considered optically active amines, there is no teaching to select for a specific chiral amine in *enantiomeric excess* in combination with a polyisocyanate according to claim 8 as amended. Indeed, the Examiner admits as much in stating “Buter does not disclose the monoamine being one or more optically active carbon –substituted methylamines of formula I...”. As such, Buter cannot cure the defects of Kurosaki.

However, Applicants submit that, should clarifying that the enantiomeric excess of greater than 20% be helpful in further clarifying the advantages of the claimed invention and further distinguishing over any prior art, Applicants would be willing to contemplate such an amendment.

Further, there is no suggestion or motivation to combine Kurosaki and Buter to arrive at the claimed invention. As there is no suggestion or motivation, there can be no reasonable expectation of success. As such, the combination of Kurosaki and Buter cannot render claims 8-11 and 13-21 as amended obvious, and therefore the §103 rejection is improper with respect to these references and should be withdrawn.

As an alternative combination, the Examiner puts forth the combination of Kurosaki, Buter and Flosbach. However, as discussed above, the combination of Kurosaki and Buter cannot render the claimed invention obvious because the combination fails to teach or suggest the use of optically active monoamines or optically active monoisocyanates in enantiomeric excess in combination with polyisocyanates or polyamines respectively in a rheology modification agent.

Flosbach does not cure this defect. The Examiner states that “Flosbach et al discloses a dual cure coating composition based on acryloyl functional compounds (col.3, lines 52; col 6, lines 49) using a sag control agent prepared from amines and polyisocyanate (col 8, line 34). The teachings demonstrate that a sag control agent prepared from amines and polyisocyanate are recognized in the art as suitable additive for coating systems.”

However, nowhere does the Examiner assert, nor does Flosbach disclose, optically active amines or isocyanates selected for in enantiomeric excess for use in a rheology modification agent. As such, Applicants submit that the combination of Kurosaki, Buter and Flosbach do not teach the limitations of the claimed invention.

Moreover, the combination of the cited references does not suggest or provide motivation to modify and/or combine the cited references to arrive at the claimed invention. Indeed, no teaching or suggestion of optically active ingredients in a rheology modification agent is present in any of the cited references. As such, Applicants submit that the instant §103 rejection in view of Kurosaki, Buter and further over Flosbach is improper and should be withdrawn.

Finally, in response to the Examiner’s suggestion that the process of claim 8 should be ignored because determination of patentability is based on the product itself is similarly misplaced as the Examiner has not come forward with any reference that anticipates or renders the instant invention obvious, as discussed above. For this reason, the burden still lies with the Examiner.

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Extension of Time

Any extension of time that may be deemed necessary to further the prosecution of this application is hereby requested.

Authorization to Charge Fees

The Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Deposit Account No. 08-3038, referencing the docket number shown above.

Authorization to Communicate via email

Pursuant to MPEP 502.03, authorization is hereby given to the USPTO to communicate with Applicant's representative concerning any subject matter of this application by electronic mail. I understand that a copy of these communications will be made of record in the application file. Applicant's representative, Coraline J. Haitjema, can be reached at email address haitjemac@howrey.com.

The Examiner may also contact the undersigned by telephone at the number given below in order to resolve any questions (note, this telephone number is an Amsterdam phone number, Amsterdam time is 6 hours ahead of US east coast time).

Respectfully submitted,

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